

DAFTAR PUSTAKA

- Aelenei, P., A. Miron, A. Trifan, A. Bujor, E. Gille, A. C. Aprotosoai. 2016. *Essential oils* and their components as modulators of antibiotic activity against g-negative bacteria. *Medicine*. 3(19): 1-34.
- Aengwanich, W., P. Sridama, Y. Phasuk, T. Vongpralab, P. Pakdee, S. Katawatin, S. Simaraks. 2003. Effects of ascorbic acid on cell mediated, humoral immune response and pathophysiology of white blood cell in broilers under heat stress. *Journal Science Technology* 25:297-305.
- Aguilar, C. A., K. R. S. Lima, M. C. Manno, F. B. Tavares, V. P. Souza, D. L. F. Neto. 2013. Effect of copaiba essential oil on broiler chicken's performance. *Maringa Journal* 35(2): 145-151.
- Akbari, M., M. Toriki, and K. Kaviani. 2016. Single and combined effects of peppermint and thyme essential oils on productive performance, egg quality traits, and blood parameters of laying hens reared under cold stress condition ($6.8 \pm 3^\circ\text{C}$). *International Journal of Biometeorology* 60(3): 447-454.
- Ambarwati, L. dan Nur S. 2017. Pengaruh penambahan selenium dan vitamin E terhadap performans ayam petelur periode akhir. *Prosiding Seminar Teknologi dan Agribisnis Peternakan V: teknologi dan agribisnis peternakan untuk mendukung ketahanan pangan. Fakultas Peternakan Universitas Jenderal Soedirman*. Pp. 124-128.
- Amrullah, I. K. 2003. *Nutrisi Ayam Petelur*. Lembaga Satu Gunung Budi. Bogor.
- Anjarsari, B. 2010. *Pangan Hewani Fisiologi Pasca Mortem dan Teknologi*. Graha Ilmu. Yogyakarta.
- Argo, L. B. dan Mangisah. 2013. Kualitas fisik telur ayam arab petelur fase I dengan berbagai level *Azolla microphylla*. *Animal Agricultural Journal*. 2(1): 445-457.
- Arpasova. H., M. Kacaniova, and B. Galik. 2013. The effect of oregano *essential oil* and pollen on egg production and egg *yolk* qualitative parameters. *Animal Science and Biotechnologies* 46(1):12-16.
- Asaduzzaman, M., M. S. Jahan, M. R. Mondol, M. A. Islam, A. K. Sarkar. 2005. Efficacy of different commercial vitamin - mineral premixes on productive performance of caged laying pullets. *Poultry Science*. 4(8): 589-595.
- Bayoa, D. L. M., C. L. K. Saraya, M. Najoran, W. Utiah. 2014. The addition effectiveness of *Curcuma xanthorrhiza* Roxb. and *Curcuma zedoaria* Roxb. Flours in commercial ration on performances of broilers. *Journal Zootek* 34: 85-94.

- Bell, D. and Weaver. 2002. Commercial Chicken Meat and Egg. Kluwer Academic Publishers. New York.
- Bintang, I. A. K., A. P. Sinurat, dan T. Purwadaria. 2008. Penambahan antibiotika dan ampas mengkudu sebagai senyawa bioaktif terhadap performans ayam broiler. *Jurnal Ilmu Ternak dan Veteriner*. 13: 7-12.
- Bolugbasi, S. C., M. Kuddusierhan, H. Urusan. 2010. The effect of supplementation of bergamot oil (*Citrus bergamia*) on egg production, egg quality, fatty acid composition of egg yolk in laying hens. *Journal Poultry Science*. 47: 163-169.
- Bozkurt, M., O. Tokusoglu, K. Kucukyilmaz, H. Aksit, M. Cabuk, A. U. Catli, K. Seyrek, M. Cinar. 2012. Effects of dietary mannan oligosaccharide and herbal *essential oil* blend supplementation on performance and oxidative stability of eggs and liver in laying hens. *Italian Journal of Animal Science* 11: 223-229.
- Brenes, A. and E. Roura. 2010. *Essential oils* in poultry nutrition: Main effects and modes of action. *Animal Feed Science and Technology*. 158(2): 1-14.
- Brodacki, A., J. Batkowska, and B. Makarski. 2009. The effect of feeding with feedstuff containing microbial and plant phytase additive on performance of young slaughter turkeys. *Acta Agriculture Scandinavian Section*. 59: 137- 141.
- Buckle, K. A, R. A. Edwards, G. H. Fleet, and M. Wooton. 2009. Food science. International Development Prog of Australian University and Colleges. Sydney.
- Çabuk, M., M. Bozkurt, A. Alçiçek, Y. Akbaş, and K. Küçükyılmaz. 2006. Effect of a herbal essential oil mixture on growth and internal organ weight of broilers from young and old breeder flocks. *South African Journal Animal Science*. 36(2): 135-141.
- Çabuk. M., S. Eratak, A. Alçiçek, and M. Bozkurt. 2014. Effects of herbal essential oil mixture as dietary supplement on egg production in quail. *The Scientific World Journal*. 2014: 1-4.
- Casewell, M., C. Friis, E. Marco, P. McMullin, I. Phillips. 2003. The European ban on growth-promoting antibiotics and emerging consequences for human and animal health. *Journal of Antimicrobial Chemotherapy*. 52: 159-161.
- Chaichana. J., W. Niwatananun, S. V. S. Somna, S. Chansakaow. 2009. Volatile constituents and biological activities of *Gardenia jasminoides*. *Journal of Health Research*. 23(3): 141-145.

- Chung, T. 2002. Yellow and red careotenoids for egg *yolk* pigmentation. Tenth Annual ASA Southeast Asian Feed Technology and Nutrition Workshop. Merlin Beach Resort. Phuket.
- Cross, D. E., R. McDevitt, K. Hillman, and T. Acamovic. 2007. The effects of herbs and their associated essential oils on performance, dietary digestibility and gut microflora in chickens from 7 to 28 days of age. *British Poultry Science*. 48: 496–506.
- Daud, M., W.G. Piliang, dan I.P. Kompiang. 2007. Persentase dan kualitas karkas ayam pedaging yang diberi probiotik dan prebiotik dalam ransum. *Jurnal Ilmu Ternak dan Veteriner*. 12: 167-174.
- Ding, X., Y. Yu, S. Zhouwei and K. Zhang. 2017. Effects of essential oil on performance, egg quality, nutrient digestibility and *yolk* fatty acid profile in laying hens. *Animal Nutrition* 3(2): 127-131.
- Dirgahayu, F. I., D. Septinova, dan K. Nova. 2016. Perbandingan kualitas eksternal telur ayam ras strain Isa Brown dan Lohmann Brown. *Jurnal Ilmiah Peternakan Terpadu* 4(1): 1-5.
- Elaissi. A., Z. Rouis, N. A. B. Salem, S. Mabrouk, Y. B. Salem, K. B. H. Salah, M. Aouni, F. Farhat, R. Chemli, F. H. Skhiri and M. L. Khouja. 2012. Chemical composition of 8 eucalyptus species essential oils and the evaluation of their antibacterial, antifungal and antiviral activities. *Journal of Biomedical Science*. 12(81): 1-15.
- Fani, M. 2010. Kajian Kualitas dan Keamanan Telur Ayam Konsumsi pada Peternakan Ayam Petelur dengan Kepemilikan yang Berbeda di Kabupaten Bogor. Skripsi Sarjana Peternakan Fakultas Peternakan, Institut Pertanian Bogor, Bogor.
- Fauziah, A., I. Mangisah dan W. Muningsih. 2013. Pengaruh penambahan vitamin E dan bakteri asam laktat terhadap pencernaan lemak dan bobot telur ayam kedu hitam dipelihara secara *in situ*. *Journal of Animal and Agriculture*. 2(1):319-328.
- FDA. 2017. Food and Drug Administration. Substances Generally Recognized as Safe. United States Department of Health and Human Service. New York.
- Florou-Paneri, P., G. Palatos, A. Govaris, D. Botsoglou, I. Giannenas, I. Ambrosiadis. 2005. Oregano herb versus oregano *Essential oil* as feed supplements to increase the oxidative stability of Turkey meat. 4(11): 866-871.
- Gadir, S. A and I.M. Ahmed. 2014. *Commiphora myrrha* and *Commiphora africana* essential oils. *Journal of Chemical and Pharmaceutical Research*. 6(7): 151-156.

- Giannenas, I., P. C. Florou-Paneri, N. Botsoglou, A. B. Spais. 2005. Effect of supplementing feed with oregano and or α -tocopheryl acetate on growth of broiler chickens and oxidative stability of meat. *Journal of Animal and Feed Sciences*. 14(3): 521-535.
- Gopi, M., K. Karthik, H. Vasanthachar, P. Tamilmahan, M. Kesavan, M. Dashprakash, B. L. Balaraju and M. R. Purushothaman. 2014. Essential oils as a feed additive in poultry nutrition. *Advances in Animal and Veterinary Sciences*. 2(1): 1-7.
- Greathead, H. 2003. Plants and plant extracts for improving animal productivity. *Proceedings of Nutrition Society*. 62: 279-290.
- Hammershøj, M. and N. F. Johansen. 2016. Review: The effect of grass and herbs in organic egg production on egg fatty acid composition, egg yolk colour and sensory properties. *Livestock Science* 194: 37-43.
- Hartono, T. A., A. W. Puger, I. M. Nuriyasa. 2014. Kualitas telur lima jenis ayam kampung yang memiliki warna bulu berbeda. *Peternakan Tropika* 2(2): 153-162.
- Hashemi, S. R. and H. Davoodi. 2010. Phyto-genics as new class of feed additive in poultry industry. *Journal of Animal and Veterinary Advances*. 9(17): 2295-2304.
- Inal, F., B. Coskun, N. Gulsen, V. Kurtoglu. 2001. The effect of withdrawal of vitamin and trace mineral supplementations from layer diets on egg yield and trace mineral composition. *British Poultry Science*. 42: 77-80.
- Jamal, A. A. N. 2007. Penambahan kalsium pada ransum terhadap performa produksi telur ayam wareng tangerang yang dipelihara secara intensif. Skripsi Fakultas Peternakan Institut Pertanian Bogor. Bogor.
- Jang, I. S., Y. H. Ko, S. Y. Kang, C. Y. Lee. 2006. Effect of a commercial essential oil on growth performance, digestive enzyme activity and intestinal microflora population in broiler chickens. *Animal Feed Science and Technology*. 134(2007): 304–315.
- Kasih et al 2014
- Keener, K. M., K. C. McAvoy, J. B. Foegeding, P. A. Curtis. 2006. Effect of testing temperature on internal egg quality measurements. *Journal of Poultry Science*. 85(3): 550-555.
- Krishan, G. and A. Narang. 2014. Use of essential oils in poultry nutrition: A new approach. *Journal of Advanced Veterinary and Animal Research*. 1(4): 156-162.

- Kumari, P., M. K. Gupta, R. Ranjan, K. K. Singh, and R. Yadafa. 2007. *Curcuma longa* as feed additive in broiler birds and its pathophysiological effects. *Indian Journal of Experimental Biology*. 45(3): 272-277.
- Kurniawan, M. F. T., D. P. Darmawan, dan N. W. S. Astiti. 2013. Strategi pengembangan agribisnis ayam petelur di Kabupaten Tabana. *Jurnal Manajemen Agribisnis*. 1(2): 53- 66.
- Latshaw, J. D. 2008. Daily energy intake of broiler chickens is altered by proximate nutrient content and form of the diet. *Journal of Poultry Science*. 87: 89-95.
- Lee, M. H., H. J. Lee, dan P. D. Ryu. 2001. Public health risk chemical and antibiotics residues. *Asian-Australasian Journal of Animal Sciences*. 14: 297-306.
- Lima, E. B. C., C. N. S. Sousa, L. N. Meneses, N. C. Ximenes, M. A. Santos Júnior, G. S. Vasconcelos, N. B. C. Lima, M. C. A. Patrocínio, D. Macedo, S. M. M. Vasconcelos. 2015. *Cocos nucifera* (L.) (Arecaceae): A phytochemical and pharmacological review. *Journal of Medical and Biological Research*. 48(11): 1-12.
- Mahi, M. A. dan Muharli. 2013. Pengeruh bentuk telur dan bobot telur terhadap jenis kelamin, bobot tetas dan lama menetas burung puyuh (*Coturnix. Coturnix japonica*). *Jurnal Ternak Tropika*. 14(1): 29-37.
- Mampioper, A., S. D. Rumetor, dan F. Pattiselanno. 2008. Kualitas telur ayam petelur yang mendapat ransum perlakuan substitusi jagung dengan tepung singkong. *Jurnal Ternak Tropika*. 2(9): 42-51.
- Manzanilla, E. G., J. F. Perez, M. Martin, C. Kamel, F. Baucells, J. Gasa. 2004. Effect of plant extracts and formic acid on the intestinal equilibrium of early-weaned pigs. *Journal Animal Science*. 82: 3210-3218.
- Marey, Y. A., H. R Samak, and M. A. Ibrahim. 2012. Effect of using spirulina platensis algae as feed additve for poultry diets: 1-productive and reproductive performances of local laying hens. *Egyptian Poultry Science*. 32(1): 201-215.
- Mashaly, M., G. L. Hendricks, M. A. Kalama, A. Gehad. 2004. Effect of heat stress on production parameters and immune responses of commercial laying hens. *Journal of Poultry Science*. 83(6): 889-894.
- Miles, R. D., G. D. Butcher, P. R. Henry, and R. C. Littell. 2006. Effect of antibiotic growth promoters on broiler performance, intestinal growth parameters, and quantitative morphology. *Journal of Poultry Science*. 85: 476–485.

- Mourão, D. D. S. C., T. F. D. S. Pereira, D. J. D. Souza, A. F. Chagas Júnior, M. S. Dalcin, R. A. Veloso, E. U. Leão, and G. R. D. Satos. 2017. Essential oil of *Cymbopogon citratus* on the control of the curvularia leaf spot disease on maize. *Medicines*. 4(62): 1-11.
- Mousavi, A., A. H Mahdavi, A. Riasi, and M. S. Ghombavani. 2017. Synergic effects of essential oils mixture improved egg quality traits, oxidative stability and liver health indices in laying hens fed fish oil. *Animal Feed Science and Technology*. 234(17) : 162-172.
- Mulyono, R., Murwanti, dan F. Wahyono. 2009. Kajian penggunaan probiotik *Saccharomyces cerevisiae* sebagai alternatif aditif antibiotik terhadap kegunaan protein dan energy pada ayam broiler. *Journal Tropical Animal Agriculture*. 34(2): 145-151.
- Mussawar, S., T. M. Durrani, K. Munir, Z. ul-Haq, M. T. Rahman, dan K. Sarbiland. 2004. Status of layer farms in Peshawar division, Pakistan. *Livestock Research for Rural Development*. 16(5): 25–27.
- Nafiu, O. L., M. Rusdin, dan A. Selamat. 2014. Daya tetas dan lama menetas telur ayam tolaki pada mesin tetas dengan sumber panas yang berbeda. *Jurnal Ilmu dan Peternakan Tropis*. 1(1): 32-44.
- Nasution, Z. 2007. Pengaruh suplementasi mineral (Ca, Na, P, Cl) dalam ransum terhadap performans dan IOFC burung puyuh (*Cortunix cortunix japonica*) umur 0-42 hari. Skripsi Sarjana Peternakan Fakultas Peternakan, Universitas Sumatera Utara. Medan.
- National Research Council (NRC). 1994. Nutrient Requirement of Poultry. Ninth Revised Edition. National Academy Press. Washington D.C.
- Niewold, T. A. 2007. The nonantibiotic anti-inflammatory effect of antimicrobial growth promoters, the real mode of action: A hypothesis. *Poultry Science*. 86: 605-609.
- Nobakht, A. 2014. Effect of different levels of mineral and vitamin premix on laying hens performance during the first laying phase. *Iranian Journal of Applied Animal Science*. 4(4): 883-886.
- Nogata, Y., K. Sakamoto, H. Shiratsuchi, T. Ishii, M. Yano, H. Ohta. 2006. Flavonoid composition of fruit tissues of *Citrus* species. *Bioscience, Biotechnology, and Biochemistry*. 70(1): 178-192.
- Ogunwale, O. A., A. Y. P. Ojelade, M. O. Oyewo, and E. A. Essien. 2015. Proximate composition and physical characteristic of egg from laying chickens fed different proprietary vitamin-mineral premixes under two rearing systems during storage. *Journal of Food Science and Nutrition Engineering*. 5(1): 59-67.

- Okel, F. O., A. A. Fafioli, V. Adebayo, Jegede, O. Gbolabo, Onasayanal, O. O. Adekoya, A. Rotimi, A. Olorunisola, O. Adedire, and O. O. Odugawe. 2015. Comparative effect of some proprietary vitamin and trace mineral mixture on the performance and egg quality of laying hens. *Journal of Agricultural and Veterinary Sciences*. 8(1): 83-87.
- Olgun, O. dan O. Y. Alp. 2014. Effect of dietary supplementation of *Essential oils* mixture on performance, eggshell quality, hatchability, and mineral excretion in quail breeders. *Environment Science Poultry Research*. 21: 13434–13439.
- Omidi, M., K. Taherpour, J. Cheraghi, dan H. A. Ghasemi. 2015. Influence of cardamom *Essential oils* and seeds on growth performance, blood characteristic and imunity of broilers. *Animal Production Science*. 55: 573-579.
- Özcan, M. M. and J. C. Chalchat. 2007. Chemical composition of carrot seeds (*Daucus carota L.*) cultivated in Turkey: characterization of the seed oil and *Essential oil*. *Grasas Y Aceites*. 58(4): 359-365.
- Palupi, R., L. Abdullah, D. A. Astuti, and Sumiati. 2014. Potential and utilization of *Indigofera sp.* shoot leaf meal as soybean meal substitution in laying hen diets. *Jurnal Ilmu Ternak dan Veteriner*. 19(3): 210-219.
- Pelicano, E. R. L., P. A. Souza, H. B. A. Souza, F. R. Leonelm, N. M. B. L. Zeola, dan M. M. Boiago. 2004. Productive traits of broiler chickens fed diets containing different growth promoters. *Brazilian Journal of Poultry Science*. 6: 177-182.
- Prawitya, A. S., M. H. Natsir, dan O. Sjojfan. 2015. Pengaruh penambahan probiotik *Lactobacillus sp.* bentuk tepung dalam pakan terhadap kualitas telur ayam petelur. Tesis Pascasarjana Peternakan. Fakultas Peternakan. Universitas Brawijaya. Malang.
- Rasyaf, M. 2003. Panduan Beternak Ayam Petelur. Penebar Swadaya. Jakarta.
- Rosa, G. A., L. A. Sorbello, R. L. Dittrich, M. T. T. Moraes, and E. G. Oliveira. 2011. Blood profile of Japanese quail (*Coturnix japonica*) under thermal stress. *Ciência Rural*. 41(9): 1605-1610.
- Saki, A. A., H. Aliarabi, S. A. H. Siyar, J. Salari, M. Hashemi. 2014. Effect of a phytogetic feed additive on performance, ovarian morphology, serum lipid parameters and egg sensory quality in laying hen. *Veterinary Research Forum*. 5: 287–293.
- Sakroni, K. Tintin, N. Khaira. 2015. Perbandingan tebal kerabang, penurunan berat telur, dan nilai haugh unit telur ayam ras umur simpan sepuluh hari dari strain ayam yang berbeda. *Jurnal Ilmiah Peternakan Terpadu*. 3(4): 217-220.

- Saputra, D. R., T. Kurtini, dan Erwanto. 2016. Pengaruh penambahan feed aditif dalam ransum dengan dosis yang berbeda terhadap bobot telur dan nilai haugh unit (HU) telur ayam ras. *Jurnal Ilmiah Peternakan*. 4(3): 230-236.
- Scanes, C. G., G. Brant, and M. E. Esminger. 2004. *Poultry Science Fourth Edition*. Person Education Inc. New Jersey.
- Shaker, M. M., A. Nafez., B. Jan, and Z. Mahmoud. 2018. The effect of sea Buckthorn (*Hippophae rhamnoides L*). fruit residues on performance and egg quality of laying hens. *Journal of Applied Animal Research*. 46(1): 422-426
- Shinta, D. K., P. Koen, Kasiyati. 2012. Indeks kuning telur (ikt) dan haugh unit (hu) telur puyuh hasil pemeliharaan dengan pemberian kombinasi larutan mikromineral (Fe, Co, Cu, Zn) dan vitamin (A, B1, B12, C) sebagai drinking water. *Buletin Anatomi dan Fisiologi*. 20(2): 24-31.
- Siddiqui, M. Z. 2011. *Boswellia serrata*, a potential antiinflammatory agent: an overview. *Iranian Journal of Pharmaceutical Science*. 17(6): 255-261.
- Sinurat, A. P., T. Purwadari, I. A. K. Bintang, P. P. Ketaren, N. Bermawie, M. Raharjo, M. Rizal. 2009. Pemanfaatan kunyit dan temulawak sebagai imbuhan pakan untuk ayam broiler. *Jurnal Ilmu Ternak dan Veteriner*. 14(2): 90-96.
- Skwirzyńska, M. A. and D. Szczerbińska. 2017. Use of *Essential oils* in broiler chicken production. *Annals of Animal Science*. 17(2): 317-335.
- Soeparno. 2001. *Dasar Teknologi Hasil Ternak*. Fakultas Peternakan UGM. Yogyakarta.
- Srinivasan, K. 2005. Spices as influencers of body metabolism: An overview of three decades of research. *Food Research International*. 38: 77-86.
- Steel, R. G. D. dan J. H. Torrie. 1995. *Prinsip dan Prosedur Statistika Suatu Pendekatan Biometrik*. Edisi ke-2. Gramedia Pustaka Utama. Jakarta.
- Stef, D.S. dan I. Gergen. 2012. Effect of mineral-enriched diet and medicinal herbs on Fe, Mn, Zn, and Cu uptake in chicken. *Chemitry Central Journal*. 7(3): 6-19.
- Subekti, K. 2006. Pengaruh pola waktu pemberian pakan dengan suplementasi beberapa level vitamin C terhadap performans produksi dan organ fisiologis ayam broiler. *Jurnal Ilmiah Ilmu-Ilmu Peternakan*. 12(4): 203-213.

- Subronto dan I. Tjahajati. 2008. Ilmu Penyakit Ternak III (Farmakologi Veteriner). Gadjah Mada University Press. Yogyakarta.
- Suryana, I. K. A., I. M. Mastika, A. W. Puger. 2014. Pengaruh tingkat protein ransum terhadap penampilan ayam kampung umur 22-33 minggu. *Jurnal Peternakan Tropika*. 2(2): 287-296.
- Suryanto, R. 2016. Penggunaan ramuan herbal dam tepung daun murbei terhadap *Yolk* indeks, albumen indeks dan haugh unit telur ayam arab. Skripsi Fakultas Peternakan. Universitas Hasanudin. Makassar.
- Susilorini, E. Sawitri, dan M. E. Muharlieni. 2009. Budi daya 22 Ternak Potensial. Penebar Swadaya. Jakarta.
- Swastike, W. 2012. Efektivitas antibiotik herbal dan sintetis pada pakan ayam broiler terhadap performance, kadar lemak abdominal dan kadar kolesterol darah. *Prosiding Seminar Nasional Sains dan Teknologi*. 3: 1-6.
- Torki, M., S. G. Shadi, dan M. Hamed. 2018. Effect of adding *Essential oil* of rosemary, dill and chicory extract to diets on performance, egg quality and some blood parameters of laying hens subjected to heat stress. *Journal of Applied Animal Research*. 46(1): 1118-1126.
- Ujilestari, T., S. Kismiati, dan E. Suprijatna. 2015. Pengaruh penggunaan tepung limbah rumput laut (*Gracilaria verrucosa*) terfermentasi dalam ransum terhadap kualitas kimiawi telur puyuh (*Coturnix coturnix japonica*). *Animal Agriculture Journal*. 4(1): 115-120.
- Wintari, H., E. Suprijatna, dan W. Sarengat 2013. Pengaruh penambahan tepung jahe merah (*Zingiber officinale var Rubrum*) dalam pakan terhadap kualitas telur ayam kampung periode layer. *Animal Agriculture Journal*. 2(1): 377-382.
- Wirapati, R. D. 2008. Efektivitas pemberian tepung kencur (*Kaempferia galangal linn*) pada ransum ayam broiler rendah energy dan protein terhadap performan ayam broiler, kadar kolesterol, persentase berat hati, dan bursa fabrisius. Skripsi Sarjana Peternakan Fakultas Peternakan, Institut Pertanian Bogor. Bogor.
- Yang, X., H. T. Zhao, J. Wang, Q. Meng, H. Zhang, L. Yao, Y. C. Zhang, A. J. Dong, Y. Ma, Z. Y. Wang, D. C. Xu, Y. Ding. 2010. Chemical composition and antioxidant activity of *Essential oil* of pine cones of *Pinus armandii* from the Southwest region of China. *Journal of Medical Plants Research*. 4(16): 1668-1672.
- Yulrahmen, R. 2008. Performa ayam petelur umur 21-27 minggu yang diberi air rebusan daun sirih (*Piper bettle linn*) pada air minum. Skripsi Sarjana Peternakan Fakultas Peternakan Institut Pertanian Bogor. Bogor.

- Yupi. 2011. Analisis Usaha Tani Ayam Ras Petelur. Universitas Islam Syarif Hidayatullah. Jakarta.
- Yuwanta, T. 2004. Ilmu Ternak Unggas. Kanisius. Yogyakarta.
- Yuwanta, T. 2007. Beternak Ayam Buras. Universitas Gadjah Mada. Yogyakarta.
- Zaini, M. A. A., A. Yoshimasa, dan M. Motoi. 2010. Adsorption of heavy metals onto activated carbons derived from polyacrylonitrile fiber. *Journal Hazardous Material*. 180: 552-560.
- Zulfaidah, M. 2012. Efektifitas kombinasi jumlah dan bentuk ramuan herbal sebagai imbuhan pakan terhadap performa broiler. *Buletin Nutrisi dan Makanan Ternak Universitas Hasanudin*. 9(1): 1-5.
- Zuprizal. 2006. Nutrisi Unggas. Jurusan Nutrisi dan Makanan Ternak Fakultas Peternakan. Universitas Gadjah Mada. Yogyakarta.